Candidate Review Briefing
Outline

- **The Situation [example]**
- **Coalition / Joint / Interagency Operational Problem [example]**
- **Desired Capabilities [example]**
- **Top Level Capabilities and Metrics As Applied to Joint Functional Capability Area [example]**
- **Solution Trade-Off Analysis and Alternatives Identification [example]**
- **Capabilities Solution [example]**
- **Operational View-1 (OV-1) [example]**
- **Overall Demonstration and Programmatic Strategy [example]**
- **Core Technologies [example]**
- **Interoperability and Integration [example]**
- **Security, Information Assurance and Safety [example]**
- **Overall Transition Strategy [example]:**
  - Follow-on Development, Production, Fielding and Sustainment [example]
  - Interim Capability Through Extended Use [if implemented] [example]
- **Organizational Wiring Diagram [example]**
- **Schedule [example]**
- **Cost Plan [by task and by year] [example]**
- **Funding [by source and by year] [example]**
- **JCTD Risk Management and Mitigation Approach [example]**
- **Summary and Payoffs [example]**

Use Proposal Paper Module for Topic Guidelines [if needed]

- **Back-ups:**
  - CONEMP or CONOP [example]
  - Critical Operational Issues [example]
  - Coalition / Joint / Interagency Operational Utility Assessment Strategy [example]
  - Operational Demonstration Approach [example]
  - Top Level Demonstration Scenarios [example]
  - System View-1 (SV-1) [example]
  - Technical Demonstration and Programmatic Approach [example]
  - Affordability for Transition [example]
  - Training [example]
  - Description of Products / Deliverables [example]
  - Supporting Programs [example]
  - Networks / Equipment / Facilities / Ranges / Sites [example]
  - Acquisition and Contracting Strategy [example]

Use Proposal Paper Module for Topic Guidelines [if needed]

- **In Africa, threats in the maritime domain vary widely in scope:**
  - Terrorism
  - Smuggling, narco-trafficking, oil theft and piracy
  - Fisheries violations
  - Environmental degradation

- **African nations are unable to respond to maritime security threats:**
  - Recent piracy incidents off of Somalia highlight threat
  - AU recently expressed desire to establish continent-wide maritime security action group

> *Unable to identify, prioritize, characterize and share global maritime threats in a timely manner throughout multiple levels of security and between interagency partners.*

- **Insufficient ability to achieve and maintain maritime domain <u>awareness (intelligence, people, cargo, vessel [cooperative and uncooperative]) on a global basis</u> (to include commercially navigable waterways)**

- **Insufficient ability to <u>automatically</u> generate, update and rapidly disseminate high-quality ship tracks and respective metadata (people, cargo, vessel) that are necessary to determine threat detection at the SCI level on a 24/7 basis on SCI networks**

- **Insufficient ability to <u>aggregate</u> maritime data <u>(tracks)</u> from <u>multiple intelligence sources</u> at <u>multiple levels of security</u> to determine ship movement, past history and current location**

- **<u>Inability to automatically ingest, fuse and report</u> "SuperTracks" (tracks + cargo + people + metadata [associated data]) to warfighters and analysts at the SCI level**

- **Inability to generate and display automated <u>rule-based</u> maritime <u>alert notifications</u> based on a variety of predetermined anomalous activity indicators established from SCI Intelligence Community channels**

- **Global, persistent, 24/7/365, pre-sail through arrival, maritime cooperative and non-cooperative vessel tracking awareness information (people, vessel, cargo) that flows between and is disseminated to appropriate intelligence analysts / joint warfighters / senior decision makers / interagency offices within the SCI community, with the following data manipulation capabilities:**
  - Identify, query and filter vessels of interest automatically based on user-defined criteria
  - Ensure reported track updates of the most recent location are based on the refresh rate of the source
  - Conduct advanced queries that can inference across multiple data sources at the SCI level
  - Ability to access and disseminate appropriate data to and from SCI, Secret and unclassified networks. (Secret and SBU dissemination done through other channels)
  - Display and overlay multiple geospatial data sources (e.g. mapping data, port imagery, tracks, networks of illicit behavior monitored by IC or LEA channels)
- **Automated, rule-based maritime-related activity (people, vessel, cargo) detection alerting and associated information at the SCI level (with new sources not available at lower security levels) to appropriate analysts, warfighters, senior decision makers and interagency personnel/offices:**
  - Generate and send alerts based on user-defined criteria
  - Define patterns of normal behavior based on understanding of global supply chains
  - Define alerting criteria based on models of abnormal behavior (e.g., loitering off a high-interest area)
- **UDAP User-Defined Awareness Picture**
  - Tailorable for each unit (user-defined parameters/filters)
- **SCI Subscription Service**
- **Interoperable with currently existing data sources and systems**
- **CONOP and TTP compatible with developing greater MDA CONOP and TTP**

Example: I. Overview
D. Top Level Capabilities & Metrics
as applied to Joint Functional Capability Area

Capability (From "Desired Capabilities")	Task / Attribute	Measure	Metric	Baseline (Today's Capability)	Targeted Threshold Values (FY08)	Objective Values
Global, persistent, 24/7/365 maritime cooperative and non-cooperative vessel awareness information	Identify, query and filter based on user-defined criteria	Query and filter capability across multiple MDA data types	Query and filter fidelity	Limited capability to identified ships only	Automated query and filter of MDA data within 1-2 hours of data receipt	Automated query and filter of MDA data within minutes of data receipt
	Track updates	Collector refresh rate and data latency	Timeliness	Manual data correlation	1 hour average (varies by INT)	15 minutes
	Track quantity	Number of valid tracks within the system that contribute to vessel awareness	Number of unique tracks	Manual: 200-300 VOIs Automatic: 1200	20,000 automated and unique tracks	50,000 automated and unique tracks
	Track quality	Number of valid and verified positions that form a track	Variance between actual and reported tracks. (and/or) confidence of the positions from the track composition	Manual: Very high ~ (approx) 99.5% automatic: confidence is high, but ID varies	Unique track that contains vessel, or people, or cargo awareness information	Unique track specifically identifies the vessel, cargo and people
	Advanced queries	Ability to provide sophisticated query capabilty to multiple MDA data sources	Query sophistication	Manual and limited to known ships	Multiple parameters (GT 5) for each query	Multiple parameters (GT 10) for each query.
	Access and disseminate data	Ability to security downgrade MDA information and pass to a Guard	Provide downgraded data to GUARD in a timely fashion	Guard technology limits quantity and quality of data downgrades, slows timeliness	Flexible guard data definitions and timely (within 2 hours) response	Increase timeliness to less than 1 hour
	Geospatial data sources	Accessibility of mapping data	Ability to overlay static MDA information on mapping data	Limited capability	Same as current capability	Automated overlays of MDA information on mapping data

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Desired Capability: Global, Persistent, 24/7/365 Maritime Cooperative and Non-Cooperative Vessel Awareness Information							
Task / Attribute Alternatives	Identify, Query and Filter Based on User-Defined Criteria	Track Updates	Track Qualty	Track Quantity	Advanced Queries	Access and Disseminate Data	Geospatial Data Sources
JCTD Candidate							
Status Quo							
Alternative #1							
Alternative #2							
Alternative #2							

- **Status Quo**
  - Description of status quo –
- **Feasible Competitive Alternatives**
  - Name of alternative capability, system, tool, technology, or TTP 1, PM, vendor
    - Descriptions
  - Name of alternative capability, system, tool, technology, or TTP 1, PM, vendor
    - Descriptions
  - Name of alternative capability, system, tool, technology, or TTP 1, PM, vendor
    - Descriptions

- **Combined hardware and software system consisting of the following:**
  - <u>Multi-INT Sensor Data and Databases</u> [People, Vessel, Cargo, Infrastructure, 24/7, global basis]
    - Provides capability for data integration from multiple information sources [U.S. Navy, SEAWATCH, JMIE, Internet]
    - Enables access to unique SCI source data
  - <u>Multi-INT Fusion Processing Software</u> [auto correlation of SCI level data – illicit nominal/abnormal patterns]
    - Multi-INT data associations and linkages
    - Creates MDA multi-INT "SuperTracks"
    - Generates alarms/alerts on multi-INT data
  - <u>Network and Security Services Infrastructure</u> [scalable, equitable, interoperable, tailorable]
    - Leverage and use existing networks
    - Control / ensure appropriate access to/from JWICS, SIPRNET, NIPRNET
    - Publish information within an SCI SOA
    - Provides multilevel security info exchange – SBU, Secret, SCI
    - Enables continuous 24/7 information access
  - <u>Maritime Ship Tracks</u> – [automated ship activity detection, query/filter VOIs / NOAs]
    - Worldwide track generation service
    - Ship track alarms/alerts
  - <u>Operational SCI User / UDOP</u> [scalable / interoperable dissemination with interactive search for ops and analyst]
    - Provides enhanced multi-INT information track-related products for operators
    - Enables worldwide MDA SuperTrack coverage and observation
    - Display product on legacy [GALE] or other equipment
  - <u>Archive / Storage</u> [People, Vessel, Cargo, 24/7, global basis, infrastructure]
    - Maintain SuperTrack data archive for the life of the JCTD
    - Fused multi-INT knowledge products, short-term working archive
    - External database referencing and interfaces [i.e. mapping data...
  - <u>Alarms and Alert Tools</u> [detection alerting]
    - User definable controls for alarming, alerting and reporting
    - Capability to generate alerts on single anomalies or linked data/knowledge situations
  - <u>CONOP and TTP</u>
  - <u>Standardized User Interface Symbology</u>
  - <u>Leverage CMA and VTP</u>

Example: II. Operational
A. Operational View-1 (OV-1)

External Users
- UDOP
- Analysis Tools

COI Service Accesses

- Data Replication
- Archival
- Enterprise Support
- (Training, etc.)

Nd2
Enterprise Replication Repository

Service Invocations

ES
Enterprise Services
- Collaboration Services
- Security Services
- Notification Services
- Messaging Services

Replicated Repository Data

Service Invocations

Service Invocations

Service Invocations

Nd1
Enterprise Master Repository

CMA Picture (CMAP) Exchange Information

Regional Data

Nd3
Regional Node

CMA Picture (CMAP) Exchange Information

Local Data

Nd4
Sectional or Functional Node

- Collect CMA Data
- Fuse Maritime Data or Info
- Assess Threats; Alerts
- Share Threats and Picture

- Collect CMA Data
- Fuse Maritime Data or Info
- Assess Threats; Alerts
- Share Threats and Picture

Tracks, Threats, Collaboration, Alerts

Nd5
UDAP

/n

Nd5
UDAP
- Collaborate
- Define Local UDAP
- Assess Threats
- Submit Maritime Data or Info

Nd5
UDAP

/n

Maritime Data

/n

Enterprise Data Edge Cache Server 1

Enterprise Data Edge Cache Server n
- Global Maritime Domain Data Sources

Maritime Domain Awareness

- **Enhanced integration and fusion of maritime data at the SCI level**
- **Ability to access data in a Web-based construct**
- **Ability to push data to lower classification enclaves**
- **Enhanced SA provided to analysts, joint warfighters and senior decision makers**

- **Two-Phase Spiral Technical and Operational Demonstrations, FY07–08**
  - Conduct technical component tests and demonstrations:
    - Reduces risk via test-fix-test approach and warfighter input
    - Performs final integration test and demonstration
    - Serves as "dress rehearsals" for operational demonstrations (OD)
    - Two TDs: August 2007 and April 2008
    - Performed in government and industry laboratories
  - Conduct operational demonstrations
    - Conducted by analysts, joint warfighters and senior decision makers
    - Serves to captures independent warfighter assessments and determine joint operational utility
    - OD-1 / LJOUA: October 2007 (VIGILANT SHIELD)
    - OD-2 / JOUA: June 2008 (standalone demo)
    - Performed at NMIC (USCG ICC and ONI), NORTHCOM JIOC, JFMCC North, NSA

Enables Early / Incremental Transition to Warfighters pending JOUA

Example: III. Technical
C. Core Technologies

Technology	Pre-JCTD	FY09
Architecture and Software		
Web-GIS Compatible Tools	8	9
JIM Knowledge Management Module	6	7
Integrated Common Operational Picture	7	7
Integrated Software Tool Suite	4-6	7
NECC-Like Architecture	5	8
Communications and Networking		
IP, Web-Based, Commercially Secure Network	9	9
DIT Support Module		
Database Management Tools	7	9
Language Management Tools	5	7
Web-GIS Compatible Tools	8	9

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- **Technical approach**
  - AOA / tech assessment
  - Services oriented architecture – leverage CMA services as much as possible
  - Maximize COTS hardware and software
  - Leverage installed data processing systems
  - Minimum impact to legacy interfaces / standards [GALE and DCGS]
  - Minimize change to communications systems or networks
  - DoDIIS and NCES compliance
  - Navy and NMIC: enterprise SOA standards
  - NRO/NSA: OTH Gold
  - NORTHCOM JIOC: JWICS compliance
  - JFMCC: JWICS compliance
  - USCG HQ/ICC: JWICS compliance
  - Maritime Information Interchange Model (MIEM) compliance
  - Publish to IBS service standard format
  - Internal to JCTD:
    - SQL, PKI Certs., CMA, NGA GDS, browser-enabled applications, GALE
    - Custom database interfaces as required by data providers
    - SFS/ NTIPS
- **CONOP integration**
  - Enhancement to current TTP/CONOP [national/Navy/USCG]
  - New functionality implemented within legacy user interface capabilities
- **Activity coordination required**
  - Data exchange – interoperability validation (at the user interface only)
  - Operational approval – local data authority
  - Data access / operational use - DoD and IC partners (MOA/rqmt)
  - Ensure compliance with JFCOM guidance

- **Operates at the SCI security level**
- **Interface with JWICS, SIPRNet (via Guard), NIPRNet (via Guard) networks**
- **Users may access JCTD-derived services from within SCI enclave**
  - JCTD data available to Secret users via a security guard
- **Need to establish a critical path for guard approval process at ONI**
- **Authority to Operate the Demo:**
  - Obtain approval 2 months prior to each OD (August 1, 2007 for OD1)
    - Scanner results are an input to the approval process
  - NMIC: SV-1, SSAA (incl. risk mitigation plan), security scanners (for ports), infrastructure CCB, ISSM, IATO needed, mobile code complicates approvals
  - NORTHCOM: same as NMIC, DAA, network bandwidth consumption, CCB 2 months prior to OD, interim approval to connect (IATC) needed to open firewall
  - MAST: IATO, coordinate with NSA S14F2 to facilitate
  - JFMCC North: same as NORTHCOM
  - Guard approval / certification for information beyond tracks, ODNI
    - 2 weeks to 2 years
    - Must be completed before site approval
- **Includes a security management plan**
  - Mission assurance category definition
- **Leverage CMA security and information assurance management**
- **Data tagging (if implemented)**
  - Products for dissemination only
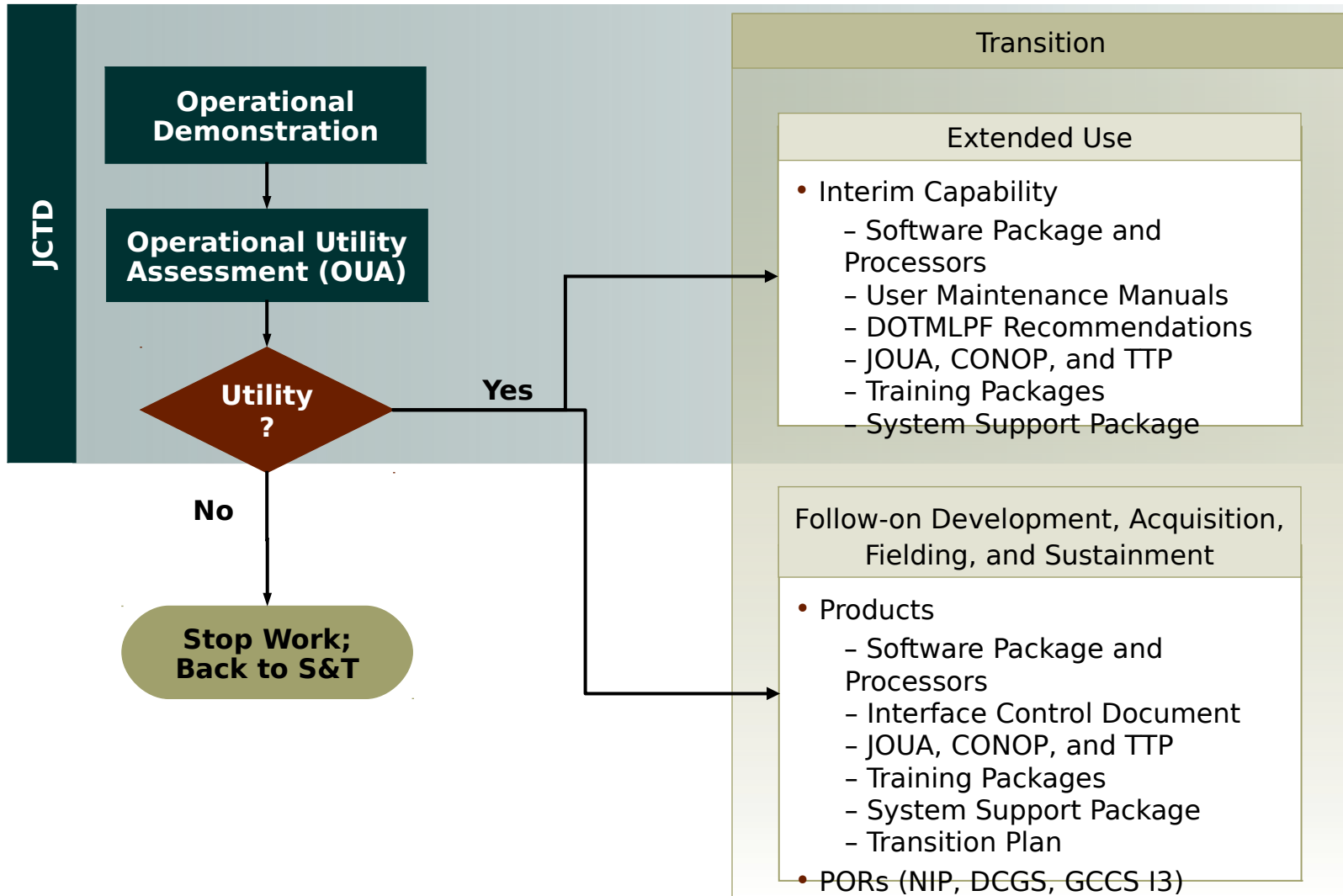 - Report-level tagging
  - Will comply with CAPCO standards

JCTD

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Operational Demonstration

Operational Utility Assessment (OUA)

Utility ?

Yes

No

Stop Work; Back to S&T

Transition

Extended Use

• Interim Capability
  – Software Package and Processors
  – User Maintenance Manuals
  – DOTMLPF Recommendations
  – JOUA, CONOP, and TTP
  – Training Packages
  – System Support Package

Follow-on Development, Acquisition, Fielding, and Sustainment

• Products
  – Software Package and Processors
  – Interface Control Document
  – JOUA, CONOP, and TTP
  – Training Packages
  – System Support Package
  – Transition Plan
• PORs (NIP, DCGS, GCCS I3)

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- **Products and deliverables transitioned to acquisition PMs in FY09 pending successful OUA in FY08 and resource sponsor commitment:**
  - Could start in FY08 pending IOUA results and resource sponsor commitment
  - Targeted PMs and Programs of Record (POR) / Programs
    - PMs / POR: National Intelligence Programs (NIP), DCGS, GCCS-I3
- **Follow-on development requires (~12 months):**
  - Production design
  - Certification and Accreditation
  - Operational Test and Evaluation
- **Production and fielding starts in FY10:**
  - Low Rate Initial Production (LRIP) and sustainment, FY10
  - Full Rate Production and sustainment, starting in FY11
- **Equipment should be COTS/GOTS to the greatest extent possible**
- **Competitive RFP and contract(s)**
- **Fleet Forces Command (FFC), Director of National Intelligence (DNI), Office of Naval Intelligence (ONI) primary capability developers for CDD**
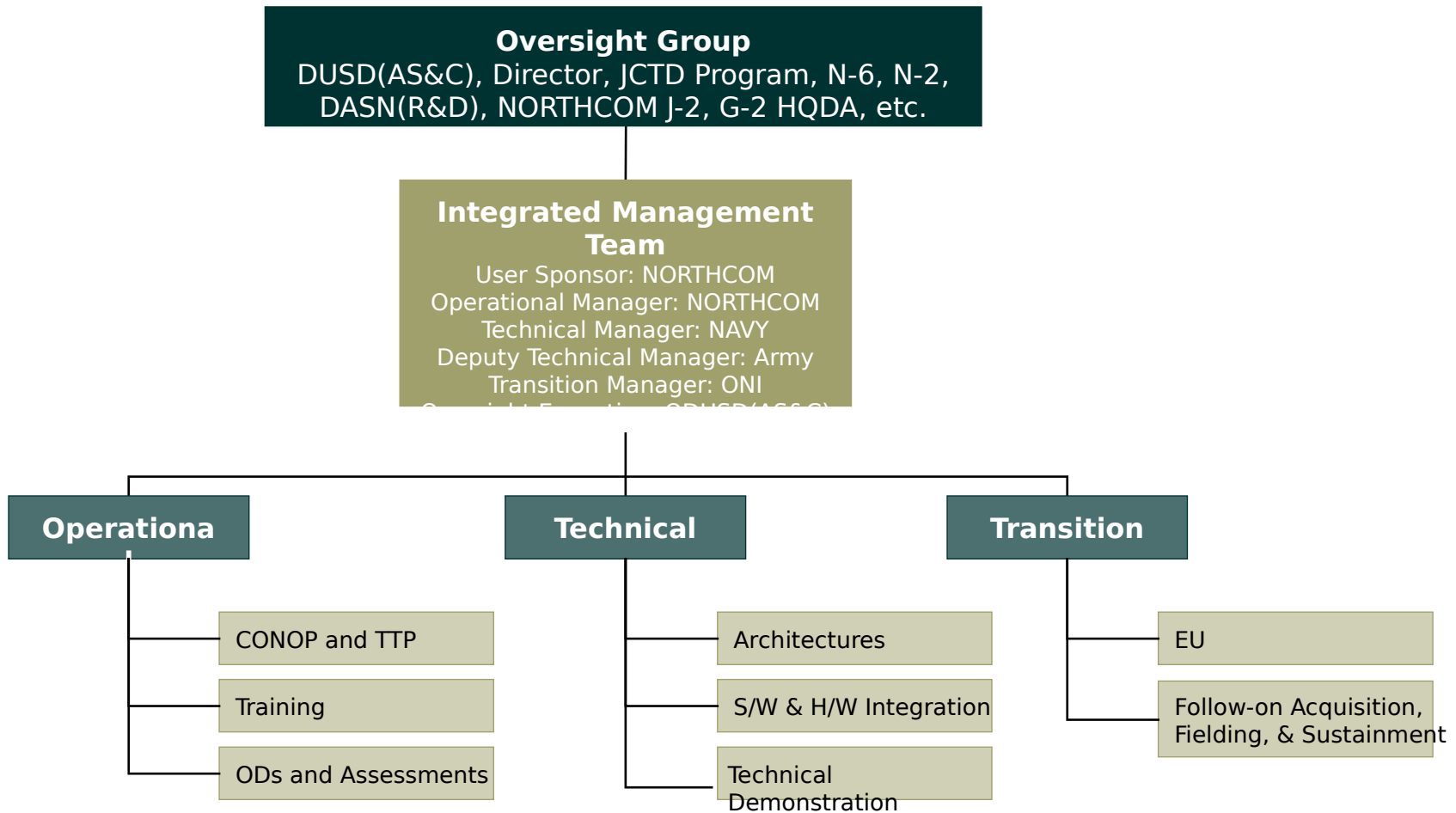- **TM and OM will provide feedback from EU (if conducted)**

- **Conducted with operational components at demonstration sites in FY10**
    - Pending IOUA; could start in 2nd qtr., FY09
    - 21 months maximum
- **Includes hardware, software, and documentation (see Products / Deliverables)**
    - Could be "Go-to-Pre-Crisis, Crisis and Post-Crisis" capability
- **Finalizes CONOP, TTP, training package, and DOTMLPF recommendations**
- **Qualitative decision maker, planner, responder feedback [not required] iterated with:**
    - JFCOM, DoS, host nations, combat development centers and schoolhouses
    - Program managers and special project offices
- **TM provides technical support [as needed]**
- **Requires positive I/JOUA**
- **Requires operational / combat developer and PM commitment for post-demonstration time frame**
- **Does not enhance capability or continue assessments**
- **Details defined in Section IV, Transition Management of the Management and Transition Plan**

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Oversight Group
DUSD(AS&C), Director, JCTD Program, N-6, N-2, DASN(R&D), NORTHCOM J-2, G-2 HQDA, etc.

Integrated Management Team
User Sponsor: NORTHCOM
Operational Manager: NORTHCOM
Technical Manager: NAVY
Deputy Technical Manager: Army
Transition Manager: ONI

Operational

- CONOP and TTP
- Training
- ODs and Assessments

Technical

- Architectures
- S/W & H/W Integration
- Technical Demonstration

Transition

- EU
- Follow-on Acquisition, Fielding, & Sustainment

Supporting narrative descriptions for each management area provided in Proposal Paper

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Major Tasks	FY07				FY08				FY09				FY10			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
FY09 PBR Build and Submittal																
FY10 PBR Build and Submittal																
FY11 PBR Build and Submittal																
FY10-15 POM Development Build and Review					Develop Issues		Services Build		OSD Reviews							
Develop JCTD Implementation Directive and MTP																
Define User Requirements																
Develop CONOP / TTP																
Develop Plans (Training, Test, Security)																
Develop Operational Architecture																
Solutions / Technologies Analysis of Alternatives																
Develop System Architecture																
Build and Test Software / Hardware Components																
Integrate Components																
Technical Demonstrations					TD1				TD2							
Operator Training																
Operational Demonstrations and Assessments					OD1		IC1a		OD2							
Operational Utility Assessment Reports					LOUA				OUA							
Extended Use																
Follow-on Development, Acquisition, Fielding and Sustainment																

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2009 Candidate Review Board				
XYZ JCTD Functional Cost Estimation ($ Thousands)				
Task / Item	**FY09**	**FY10**	**FY11**	**TOTAL**
Basis of Estimate: (see Cost Plan Guidelines)				
Operational				
Concept of Operations (CONOPS) / Tactics, Techniques, Procedures (TTPs)				$0
Demonstrations and Assessments				$0
Training				$0
Travel				$0
Joint / Operational Utility Assessment J/OUA Reports				$0
Operational Total Estimate	$0	$0	$0	$0
Technical				
Site surveys and trade off analysis				$0
Architecture and integration software systems				$0
Technical Tests and Demos				$0
Harbors / Ports Facilities computers, servers, displays				$0
National Operations Center computers, servers & displays, switches, modems				$0
Regional Coordination Center computers, servers, displays, switches, modems				$0
UPS / back-up power sources/power conditioners				$0
Communications hardware (TBD), including SATCOM terminals				$0
Coastal radar suites				$0
AIS systems				$0
EO/IR sensor suites				$0
Cell Phones				$0
Binoculars				$0
UHF/VHF Radios				$0
Towers (AIS, radars and comms)				$0
Training Package				$0
Travel				$0
Technical Documentation				$0
Technical Total Estimate	$0	$0	$0	$0
Transition				
Interim Capability Sustainment (discuss with OE on BA4 transition funding)				$0
Transition Planning				$0
Travel				$0
Transition Total Estimate	$0	$0	$0	$0
Estimated Total Cost	$0	$0	$0	$0

These itemized lines are examples only. Please tailor the lines to justify the estimated costs for your JCTD broken down in the three major areas: Operational, Technical and Transition.

Each line could be further broken down into subareas (e.g. manpower and materials) if desired at the OE's discretion, however, is not necessary at the Candidate Reiview Board.

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Oversight Executive

01-Feb-08

FY09-12 AS&C JCTD Funding Template

(For use in presenting FY-09 JCTD Candidate funding fair-share profiles)

Funding Risk: **Green**

JCTD Title - Example

Yellow $$ cells are formula driven.
(Dollars in Thousands)

Organization	(Note 1) Commitment	Type of Funding	² Funding Description	³ Program Element (PE)	Project #	FY-09	FY-10	FY-11	FY-12	Total
USN	Committed	RDT&E/6.3	Cash	0602123N	N/A	$ 2,000	$ 2,000	$ 1,000	$ -	$ 5,000
USA	TBD	TBD	Cash	N/A	N/A	$ -	$ -	$ -	$ -	$ -
USAF	Committed	RDT&E/6.3	Cash	0603401F	5021	$ 1,000	$ 1,000	$ 2,000	$ -	$ 4,000
SOCOM	TBD	TBD	Cash			$ -	$ -	$ -	$ -	$ -
DISA	TBD	TBD	Cash			$ 500	$ 500	$ -	$ -	$ 1,000
DTRA	Committed	RDT&E/6.3	Cash	0602715BR	BF	$ 1,000	$ 1,000	$ 2,000	$ -	$ 4,000
USMC	TBD	TBD	Cash			$ -	$ -	$ -	$ -	$ -
DISA	Uncommitted	TBD	Cash			$ -	$ 1,000	$ 1,000	$ -	$ 2,000
NIMA	Committed	RDT&E/6.3	Cash	0305102BQ	TBD	$ 6,500	$ 6,500	$ -	$ -	$ 13,000
		Total Service & Defense Agency (committed)				$ 10,500	$ 10,500	$ 5,000	$ -	$ 26,000
DUSD (AS&C)	TBD	RDT&E/6.3	Cash	0603648D8Z	648	$ 4,000	$ 4,000	$ 2,000	$ -	$ 10,000
			Total Cash Committed Funding:			$ 14,500	$ 14,500	$ 7,000	$ -	$ 36,000
			Stated JCTD Cash Requirement			$ 15,000	$ 16,000	$ 8,000	$ -	$ 39,000
			Delta to Cash Requirement			$ (500)	$ (1,500)	$ (1,000)	$ -	$ (3,000)

Service/Agency Committed:	$26,000
Percent Cash Committed	92%
Funding Risk (Cash):	Green

AS&C Percent Total: Cash Only — 28%
AS&C Percent Cash: — 28%

DinK Section

Organization	(Note 1) Commitment	Type of Funding	² Funding Description	³ Program Element (PE)	Project #	FY-09	FY-10	FY-11	FY-12	Total
USAF	Committed	TBD	Dink			$ 5,000	$ 3,000	$ -	$ -	$ 8,000
USN	Uncommitted	TBD	Dink			$ -	$ 2,000	$ -	$ -	$ 2,000
USA	TBD	TBD	Dink			$ -	$ -	$ -	$ -	$ -
USMC	TBD	TBD	Dink			$ -	$ -	$ -	$ -	$ -
			Total Cash & Dink Committed Funding:			$ 19,500	$ 19,500	$ 7,000	$ -	$ 46,000
			Stated JCTD Cash & Dink Requirement			$ 20,000	$ 21,000	$ 8,000	$ -	$ 49,000
			Delta to Cash & Dink Requirement			$ (500)	$ (1,500)	$ (1,000)	$ -	$ (3,000)

Risk Factors [JCTD]		Level of Impact	Mitigation Strategy	Expected Result
Operational	• Operational users availability	Medium	• Establish MOU between JCTD OM and Brigade; Maintain open dialogue on users status	• Users trained and available for OD1 and OD 2
	• Participation in Joint Exercise UFL 09. Status of MOU	Low	• None required	• N/A
Technical	• Airship materials life cycle vulnerable to ultraviolet rays at 60K altitude	Medium	• Conduct 6-8 month technical development effort to increase strength and life cycle characteristics	• Life cycle of materials increased from months to years at 60K altitude
Funding	• JCTD not fully funded by Defense Agency XXXX	High	• Brief Director, Defense Agency XXXX to obtain approval and funding commitment	• JCTD fully funded by signing of ID
Cost	• Cost of propulsion system unaffordable by post-JCTD PM	Low-Medium	• Let BAA to seek additional known suppliers and alternative systems	• Propulsion system cost reduced by 28% at completion of OD2 with no requirement to re-demonstrate during JCTD
Schedule	• Lead time for training of operational users. Technical Demonstration (TD) 1 conducted within 30 days of OD 1	Low	• Initiate preliminary training of users prior to TD1. Conduct short refresher training between TD 1 and OD1.	• Operational users fully trained and ready for OD1
Policy	• No ASD(C3I) policy established for adopting NATO ontology standards	Medium	• Develop, coordinate and obtain approval of ASD(C3I) policy statement	• ASD(C3I) policy established by the end of final OD
Transition	• Airship materials, Propulsion system and ASD(C3I) policy	Medium-High	• Implement and closely track Technical, Cost and Policy mitigation strategies. Brief and coordinate transition risks to DUSD(AS&C), key POR decision-makers, and ASD(C3I) to obtain guidance and support	• Senior leadership guidance and support is obtained to ensure JCTD maintains full funding and approved status, and transition is funded and immediately implemented following OD2 pending satisfactory OUA

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Example: IX. Summary and Payoffs

- **Supports GWOT by providing COCOMs and other USG agencies with maritime traffic, cargo and people information not otherwise available**

- **Enhanced regional security and stability that supports the U.S. National Strategy for Maritime Security:**
  - Reduction of the ungoverned maritime environment that fosters criminal and terrorist activities and movements
  - Enables maritime security operations for critical assets by providing basic maritime awareness

- **Precedent-setting solution to Joint, Coalition and interagency problem:**
  - Use of DoD and DHS expertise
  - Comparatively small front-end DoD investment for major interagency payoff

- **Transition direct to new MDA POR for follow-on acquisition**

- **Addressing more than traditional warfighting gaps—proactively addressing emerging national security problem through interagency and coalition cooperation strategy**

- **Fully compatible with national and USN MDA CONOP and plans**

At the top level, the CONOP is based on the implementation of the JCTD among the NMIC and NORTHCOM. The JCTD hardware and software suites within the NMIC establish an improved information-sharing environment (ISE) based on SOA principles at the SCI level. The NMIC maintains the enhanced, integrated, fused maritime SCI information that it produces in a Web-based repository. Maritime analysts are thus able to access this information and perform threat analysis by conducting advanced queries of multiple data sources. Furthermore, the NMIC disseminates the fused data products to analysts at locations such as NORTHCOM at the SCI level. Fused data products are transmitted to lower classification enclaves, as shown in figure 2-2 based on end-user needs and capabilities. The shared, common operating picture (COP) is updated at the NMIC, then shared with mission partners.

When intelligence updates reveal increased threat indicators, NORTHCOM senior leadership directs its J-2 division to obtain detailed information regarding a known deployed threat vessel. The J-2 analysts, now armed with enhanced JCTD capabilities, are able to collaborate with other maritime partners to find and fix the target of interest from the JCTD multisource data, and conduct an assessment of the information. The target of interest and associated information is shared with mission partners with the regular updating of the COP. In turn, J-2 is able to provide NORTHCOM senior leadership with an accurate composite maritime picture inclusive of the threat data, and NORTHCOM in turn notifies partner agencies and support elements to take the appropriate actions.

- **Usability (human operability):**
  - Can the analyst / operator manipulate the fused SCI-generated data to set up the following?
    - User-defined operational picture
    - Automatic anomalous detection with associated alarms
    - Ability to access and transmit SCI maritime-related data
- **Surge Usage Rates:**
  - Can the JCTD software process higher volumes of data during increases in OPSTEMPO?
- **Interoperability:**
  - Can the JCTD suite process requests for data from multiple levels of security and between different agencies?
- **Operability:**
  - Does the JCTD suite provide access to SuperTracks information, generated at the SCI level, over various networks via a services-oriented architecture dissemination process?

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Coalition / Joint / Interagency Operational Problem (C/J/IOP)

Critical Operational Issues (COI)

MTP

IAP and OUA Includes All

Top Level Capabilities and Metrics

Measures of Effectiveness (MOE)

Measures of Performance (MOP)
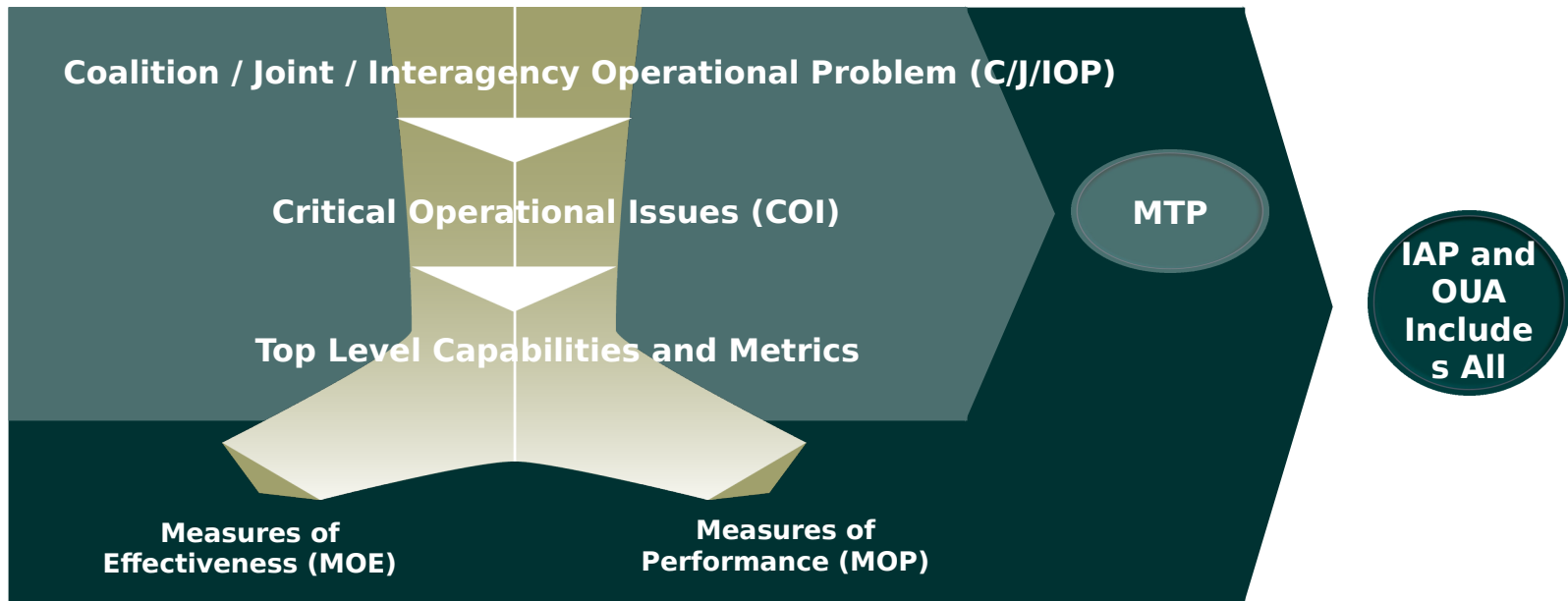
KEY:
- Management and Transition Plan (MTP)
- Integrated Assessment Plan (IAP)
- Operational Utility Assessment (OUA)

Qualitative and Quantitative Metrics Operationally Demonstrated Through CONOP / TTP

Version 1.0

M POG

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- **Conduct Two Operational Demonstrations (OD) with JIM Operators / Responders**
  - Captures Operational utility assessments (OUA) and transition recommendations:
    - Interim JOUA (IOUA), JOUA
    - Independent assessor supports operational manager
  - OD 1 (OD1) / IOUA, 4th Qtr, FY08
    - Interim capability:
      - Participants: USG Interagency (SOUTHCOM, JFCOM, USACE, DoS, USAID, country team)
      - Demonstrate integrated JCTD methodology and limited tool suite using 90% pre-crises and 10% crisis vignettes
      - Conducted as part of Vigilant Shield Exercise
  - OD 2 / JOUA, 2nd Qtr, FY09
    - Full JCTD capability:
      - Participants: USG interagency (partner nation(s), SOUTHCOM, JFCOM, USACE, DoS, USAID, country team, Mission Director, IO/NGO)
      - Demonstrate integrated and semiautomated JCTD capability using 40% pre-crises, 40% crisis, and 20% post-crisis vignettes
- **Each OD is 2 weeks long, not including deployment, testing, installation, integration, and training**
- **Enables and facilitates a leave-behind interim operational capability, including hardware, software, and documentation**
- **Training of warfighters, maintenance and sustainment provided during JCTD**
- **Independent assessment performed by JHU / APL**

Threat/Event Identification and Investigation: Collaborative Information/Intel Exchange

- Intelligence information is immediately passed from the NMIC to the DHS Operations Center, CBP, USCG headquarters, Atlantic, and Pacific areas, USFFC, and to CCDRs: USNORTHCOM, USEUCOM, U.S. Africa Command (USAFRICOM), U.S. Central Command (USCENTCOM), U.S. Pacific Command (USPACOM), U.S. Southern Command (USSOUTHCOM), and all MHQs. Each CCDR passes the information to its respective Navy MHQ. Additionally, cognizant CCDRs begin to collaborate with defense Fleet MDA CONOP 55 forces in Canada, United Kingdom, Australia, and New Zealand. Diplomatic and intelligence organizations also collaborate on this possible threat.

- The USCG coordinates with Coast Guard and customs organizations within Canada, United Kingdom, Australia, and New Zealand.

- MHQs collaboratively coordinate and plan with multiple organizations and agencies and international partners. Commander, Sixth Fleet (C6F) begins collaborative planning with North Atlantic Treaty Organization (NATO) Component Command Maritime (CCMAR) Naples. National level assets and intelligence pathways are provided for the rapid detection and promulgation of information relating to vessels of interest (VOI). NMIC generates collection requests for NTM support.

- In the event the vessel is headed toward the U.S., the USCG National Vessel Movement Center checks all advance notices of arrivals to identify the pool of inbound vessels. The USCG coordinates with CBP National Targeting Center to identify cargo manifests on all inbound target vessels. NMIC gathers information on vessels' owners, operators, crews, and compliance histories; information is passed to all CCDRs for further dissemination.
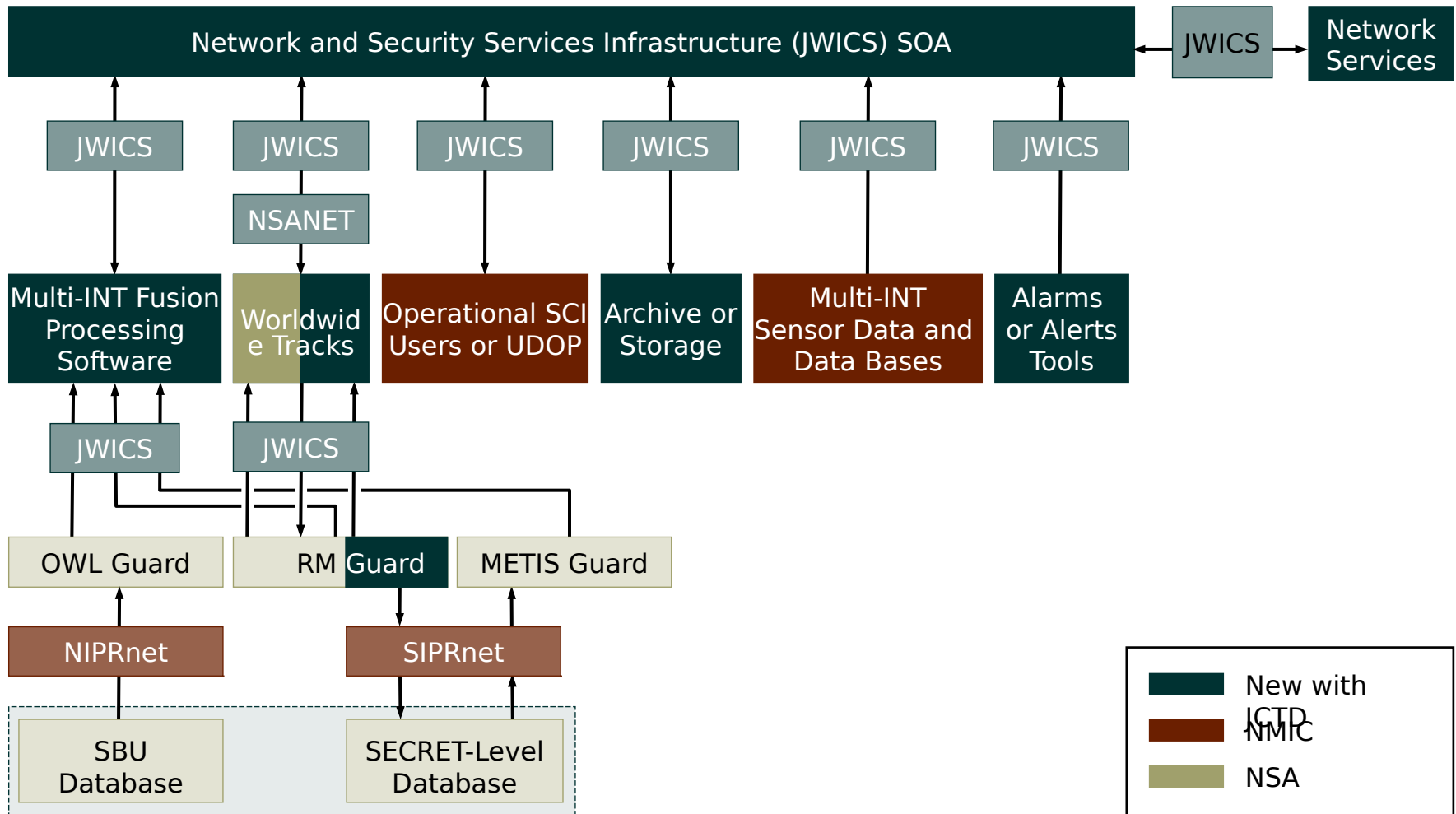
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JCTD	Example: I. Overview	DoD

Network and Security Services Infrastructure (JWICS) SOA — JWICS — Network Services

JWICS | JWICS | JWICS | JWICS | JWICS | JWICS

NSANET

Multi-INT Fusion Processing Software | Worldwide Tracks | Operational SCI Users or UDOP | Archive or Storage | Multi-INT Sensor Data and Data Bases | Alarms or Alerts Tools

JWICS | JWICS

OWL Guard | RM Guard | METIS Guard

NIPRnet | SIPRnet

SBU Database | SECRET-Level Database

Legend:
- New with JCTD
- NMIC
- NSA

- **Define JIM decision maker, planner, responder requirements (Nov-Dec 07)**
- **Conduct site surveys (i.e., data sources, equipment, tools, facilities, etc.) (Nov-Dec 07)**
- **Determine initial JIM information flow requirements including IATO (Dec 07)**
- **Establish operational and system architectures version 1.0 (Jan-Mar 08)**
- **Determine JIM net-centric enterprise services compliance and locations (Jan-Feb 08)**
- **Identify and define software interfaces for user-supplied data (Dec-Jan 08)**
- **Establish configuration management processes (Dec-Jan 08)**
- **Develop software specification and documentation (Jan-Jul 08)**
- **Initiate development of technical test plan (Jan 08)**
- **Initiate development of training package (Jan 08)**
- **Develop JIM methodology version 1.0 (Jan-Apr 08)**
- **Establish test plan version 1.0 (Mar 08)**
- **Build and test software version 1.0 (Apr-May 08)**
- **Build and test software version 1.1 (Jun-Jul 08)**
- **Develop operational and system architectures 1.1 (Jul 08)**
- **TD1 in USG laboratories (Aug 08)**
- **Develop JIM methodology version 1.1 (Aug 08)**
- **Obtain IATO from CDR, ERDC (Aug 08)**
- **Deliver training package (Sep 08)**
- **Perform software fixes version 1.2 (Sep 08)**
- **Conduct training (Oct 08)**
- **Conduct OD1 (Nov 08)**

- **Hardware:**
  - Maximize installed core and network computing, communications systems and displays ---NCES, GCCS, DCGS
    - Leverage installed SCI network nodes
  - Leverage enterprise efforts [i.e., DISA horizontal fusion project]—SOA efforts
    - Leverage installed NCES / CMA SOA
  - No change to any legacy interface—no new standards
    - Leverage customer displays
- **Software:**
  - Commercially available software
  - Controlled development production process
  - Leverage proven products

- **Approach for conducting training:**
  - CONOP and TTP Define Training
  - User Jury – Provides input to Training Plan [TM conducts]
    - Conducted at NRL
  - Training Focused on Conducting ODs
  - Will Address Both Technical and Operational Needs
    - Help from Users Needed on Operational Side
  - Conducted at User Sites (see OV-4 ovals)
  - Training Plan Content:
    - User Manuals
    - Curriculum and Instructional Materials
    - Equipment Definition
    - Staffing (JCTD Team Members)
    - Compatible With Existing Site Training Standards
    - User Prerequisites
- **Relationship to existing training plans and documents**
  - Deliver training to User Organization [NORTHCOM, NRO/NSA, NMIC, JFMCC North]
- **Preparation of training materials**
  - TM develops and conducts initial training
- **Trainees:**
  - System Administrators, Network Administrators and DBAs
  - Intel Analysts
  - Operations Specialists

Deliverable / Product	Quantity	TM	XM	OM	EU	ACQ
Hardware						
Servers, storage and associated cables, racks, etc.	2 sets	x			x	
Guards	TBD					
Software						
Integrated software system (decision aids, database management, etc.)	2 sets	x			x	x
GOTS Alarm Generation Software	2 sets	x			x	x
Archiving	2 sets	x			x	x
Multi-Int Fusion Software	2 sets	x			x	x
User Interface Software	2 sets	x			x	x
Tracking Component	2 sets	x			x	x
Oracle DBMS / J2EE / Enterprise Service Components	2 sets	x			x	x
Documentation						
CONOP	1			x	x	x
Training Plan	1	x				x
Training package (1 master document with an annex per site)	5 (1 per site)	x			x	x
LOUA Report	1			x	x	x
Final OUA Report	1			x	x	x
Interface Control Document (ICD)	1	x				x
Software Specification	1	x				x
Requirements Specification (SRS)	1	x				x
Capability Development Document (CDD)	1		x			x
Security Management Plan	1	x			x	x
Management and Transition Plan	1	x	x	x		
Test Plan	1	x				
Architectures	1	x				x
TTP	5 (1 per site)			x	x	x
DOTMLPF and Policy Recommendations/Changes	1			x	x	x

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Supporting Program	POC	Supporting Components / Systems	Date Required	DinK Funding ($000)	
				FY08	FY09
MPICE		Trend Analysis and Predictive Software	Jan 08 - Jun 09		
USAID Best Practices		Methodology	Jan 08 - Jun 09		
USAID SCALE		Methodology	Jan 08 - Jun 09		
Other Methodologies			Jan 08 - Jun 09		
NECC		Architecture, Standards, Specifications, Interoperability Requirements	Jan 08 - Jun 09		
DARPA IBC		Interagency Decision-Making Software	Jan 08 - Jun 09		
DARPA ICEWS		Trend Analysis and Predictive Software	Jan 08 - Jun 09		
Senturion		Trend Analysis and Predictive Software	Jan 08 - Jun 09		
PREACT		Geospatial Software	Jan 08 - Jun 09		

Example: V. Networks / Equipment / Facilities / Ranges / Sites

Networks / Equipment / Facilities / Ranges / Sites	Quantities	Date Required	POC
Servers	4		
Workstations	12		
Network/Internet	20		
Printers	9		
Land-line Communications	9		
Knowledge Wall Display	9		
Scanners w/ML OCR	6		
Laptops	8		
J-7 FRB, SC	1		
J SIC, J FCOM J-9	1		
DoS Facility	1		
DISA Lab	1		
ITL, Vicksburg, MS	1		
CERL, Champaign, IL	1		
TEC, Fort Belvoir	1		
Honduras COPECO OPS Center	1		
FAHUM Host Nation	1		
US Embassy, Honduras	1		

February

- **Competitive RFP will be issued for development of MDA software**
- **MOA will be established between TM and VTP program for use of MDA databases during conduct of JCTD**
- **SETA contract # xxx.xx.xx will be employed and funding added to provided two additional engineers**
- **A MIPR for $750K will be sent to JTAA to provide operational utility Assessment planning, documentation and assessor support for operational demonstrations**
- **GOTS servers, workstations and laptops will be provided at no cost to JCTD**